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Seven Points to Remember when Conducting Behavioural Studies in Support of EU Policy-making

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Abstract

The application of behavioural insights in EU policy-making is on the rise. Often these insights are the result of specific studies conducted on behalf of the European Commission. In support of this trend, the Joint Research Centre has produced this guide – structured around seven points – to EU policy officers planning to outsource a behavioural study. By reading and considering these points, they should be in a better position to effectively manage such a study.

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Summary

The application of behavioural insights in EU policy-making is on the rise. Over the past three years, several Directorates-General of the European Commission have commissioned behavioural studies under a specific framework contract. In support of this trend, the Joint Research Centre has produced this guide to policy officers planning to outsource such studies. It focusses on seven points:

1. Identifying the behavioural element as tightly as possible
2. Participating in the choice of methodology
3. Planning carefully to minimize changes along the way
4. Reconsidering the search for 'representativeness'
5. Being wary of too many experimental conditions
6. Expecting a null result
7. Ensuring the ecological validity of experiments

By reading this document and considering these points, policy officers will be in a better position to effectively manage a behavioural study.

Introduction

Public policy influences our everyday behaviour. Whether it is by discouraging smoking, increasing tax compliance, attempting to reduce carbon emissions or changing consumption patterns of genetically-modified foods, policies ultimately have an impact (strong or weak, direct or indirect) on what we do. A better understanding of human behaviour, therefore, can help policy makers anticipate the behavioural consequences of policy initiatives and so contribute to the design and implementation of more effective policies.

The principles of evidence-based policy-making require that this improved understanding of behaviour be based on robust evidence, rather than intuition or conviction. These behavioural insights are being increasingly used in policy-making worldwide[1], a trend to which the European Commission (EC) is contributing significantly. In some cases, these insights come from the scientific literature or from previous applications in other policy domains; but in others, they come from ad hoc behavioural studies.

In 2012, the EC's Directorate-General for Health and Consumer Protection (SANCO) and the Executive Agency for Health and Consumers (EAHC) set up a framework contract to facilitate the outsourcing of behavioural studies in support of EU policy.[2] To date, 19 behavioural studies have been, or are being, conducted under this framework contract. The Joint Research Centre (JRC, the EC's in-house science think-tank), in turn, has provided scientific support to the design and implementation of these studies.

This policy brief is a follow-up to *Applying Behavioural Sciences to EU Policy-making*[3], and aims to provide policy-makers with practical guidance for planning and managing a behavioural study[4]. It draws substantially (though not exhaustively or exclusively) on the experience gathered after three years of conducting behavioural studies in support of EU policy. More specifically, it relies on the insights of policy officers and behavioural researchers involved in these studies, as shared at the *Good Behavioural Research for EU Policy-making* workshop (Seville, May 2014). A brief summary of those EU studies that have been published, including their formal title, is included as an annex to this document. They are also mentioned as examples throughout this report, using their abbreviated titles.

Behavioural research has shown that the number of items a person can hold in working memory is seven (plus or minus two)[5]. Since this policy brief, which

1 Lunn P (2014) Regulatory Policy and Behavioural Economics - http://dx.doi.org/10.1787/9789264207851-en and World Bank (2015) Mind, Society, and Behaviour - http://www.worldbank.org/en/publication/wdr2015

2 http://ec.europa.eu/chafea/consumers/tenders_2011_cons_01.html

3 http://ftp.jrc.es/EURdoc/JRC83284.pdf

4 Other useful sources: Sunstein CR (2014) Nudging: A very short guide - http://ssrn.com/abstract=2499658, and the Stirling Behavioural Science Blog - http://economicspsychologypolicy.blogspot.co.uk/

5 Miller, G. A. (1956). The magical number seven, plus or minus two: Some limits on our capacity for processing information. Psychological Review 63 (2): 81–97.

advocates relying on sound behavioural insights, aims to be a useful tool for policy-makers, it is structured around seven points as well. These are seven points which policy-makers would do well to keep in mind when commissioning behavioural studies in order to increase the likelihood of achieving a successful outcome.

Checklist for policy officers outsourcing a behavioural study

1. Have you clearly identified the behavioural element of the policy problem?
2. Have you participated in the choice of methodology, possibly considering the use of two or more methods in the same study?
3. Have you given sufficient time for the study to proceed sequentially, with each stage building on the previous one?
4. Have you considered what specific population you need to target in order to get valid results, given that a 'representative' sample is probably not feasible?

If conducting an experiment…

5. Have you limited the number of interventions to be tested to the strictly necessary ones, aware of the trade-off between number of interventions and sample size per intervention?
6. Have you discussed with behavioural researchers how to minimise the possibility of a null result or mitigate its consequences?
7. Have you asked whether the use of incentives in your study is appropriate to ensure realistic behaviour?

I. Identify the *behavioural element* as tightly as possible

The *behavioural element* refers to an aspect of a policy problem where human behaviour is central, either because behaviour change is the main objective of a policy initiative or because people's response to it will determine its success. For example, people's recycling habits are a behavioural element in environmental policy, and people's reaction to cookie warnings are a behavioural element in online privacy policy.

There is a risk that simply identifying a behavioural element to a policy problem prompts investigation with a behavioural study, without thinking about what particular aspects of this behavioural element are relevant, and how. Not clarifying this from the outset will lead to a poorly-defined study and results that do not address the policy problem.

For example, say the objective of introducing new labelling regulations is to directly change behaviour (the case of tobacco). The behavioural element here is clear: people smoke and labelling should dissuade them from doing so. The research

question would ask: what labels most dissuade people from smoking? A behavioural study can be designed to tackle this question.

But maybe the objective of new labelling is not to change behaviour (e.g. labelling on genetically-modified foods), maybe because it is considered paternalistic or because the benefits of a change in behaviour are not so clear-cut. The behavioural element in this case would not be so clear. It might be that people are unaware of certain facts, or are misinformed, or are overestimating a given risk, or maybe lack trust in manufacturers (to name a few possibilities). All of these behavioural elements are different from one another and would need to be tackled with different research questions.

2. Participate in the choice of methodology

There is no single methodological approach that is right for a behavioural study – it all depends on the research question. Moreover, a good research design might require combining multiple methods of gathering data and verifying whether they arrive at similar findings (i.e. *triangulation*).

Qualitative methodological approaches (such as depth interviews, focus groups or participant observation) are helpful when the research question is very broad: they can help narrow down the issues that need to be considered, and can quickly identify common misconceptions. They are also useful when the focus is on the reasons that make individuals behave in a particular way; in other words, when *why* is being asked in addition to *what* and *how*. Studying the reasons that lie behind a particular behavioural outcome (the *why*) may lead to more interesting results and – importantly – to more generalizable ones.

When the research hypotheses and questions are clear from the outset, and the focus is on the *what* and *how* rather than the *why*, quantitative methods are appropriate. The most popular methodology used in EU behavioural studies over the past three years has been experiments.

Experiments are procedures where participants are made to go through a particular exercise while being exposed to a particular intervention. Their behaviour is then observed and compared to that of participants exposed to different interventions (or to nothing, i.e. the control group). Experiments are either conducted in the laboratory or online, and are valued for their almost clinical ability to isolate interventions and measure their actual impact on behaviour, beyond simply establishing correlations.

Experimental methodology can also be applied to a part of the population in a real life setting. These are *field trials*. By identifying the real-life effects of treatments, field trials lead to more robust and reliable results. Although they are seldom feasible given time and money constraints, there may be opportunities for such trials when rolling out EU or national government initiatives (such as online delivery of social services).

Combining multiple methods in EU behavioural studies

EU behavioural studies over the past few years have benefitted from the combination of different research methodologies. For example, the *Bank Accounts* study included an online survey and an experiment; the *Cross-border Healthcare* study a survey and an online experiment; the *Online gambling* study an online experiment, a lab experiment and a survey; and the *Online sustainability information* study an online experiment and a survey (see annex).

In the case of the *Car CO2 labelling* study, for example, using several approaches led to more robust conclusions. The study sought to test the effectiveness of alternative car labels and mandatory information in promotional material for informing and raising awareness about CO2 emissions and running cost of new cars. Three different methods were combined for gathering the data: an online survey (about the car purchasing process and consumers' awareness of the environmental impact of car usage), an online experiment and a lab experiment (both experiments aimed to test the effectiveness of different pieces of information in car labels).

One of the main benefits came from obtaining the same result with different methodologies. For example, results from the lab experiment corroborated those from the survey, and showed that labels based on economic aspects were more effective in increasing comprehension and awareness than labels based exclusively on environmental considerations. As a result, running costs per mile or km are some of the main attributes that should appear in car CO2 labels.

3. Plan carefully to minimise changes along the way

The design of a study will largely determine its success or failure. Once the methodology has been broadly decided, policy officers and behavioural researchers should carefully reflect and agree on the design. Effort invested at this stage will reap rewards later in the process; therefore, ample time should be allowed to develop a solid design. Once it has been agreed upon, it should not be changed, since this may involve changes to the programming of the software used in the experiments (where users normally face tasks on a computer screen), which are often very costly to make.

If a behavioural study includes different methodologies, it should allow for the insights gathered with one methodology to influence other parts of the study (i.e. a sequential design). For example, conducting focus groups in the first stages can significantly contribute to fine-tuning the design of the rest of the study. Surveys may also help identify some points to be included in the next phases (especially the design of a lab experiment). They may also be helpful once the experimental part of the study is finished, in order to gather more specific information.

A sequential design allows each part of the study to build on the previous one, leading to a more robust study which capitalizes on evidence produced through different methods. This necessarily means allowing sufficient time to conduct the study. The design of the study should also include a pilot phase to allow the design to be fine-tuned, thereby increasing the likelihood of arriving at useful results.

Sequential design for cumulative learning

The *Energy labelling* study provided an assessment of alternative energy label designs. It explored consumer understanding of the labels and how these influenced consumer choice. The study was divided in two phases. Phase I included a targeted literature review and an online behavioural experiment. In particular, the experiment sought to test choice and understanding of five labels in seven countries. The results of Phase I were presented at a stakeholder consultation meeting organised by the EC.

Phase II then built on the findings in Phase I. It studied the impact on consumer purchasing decisions and understanding of four label frames in a 'bricks-and-mortar' experiment at retail stores and centralised locations in four countries. However, it did not test the same labels as Phase I; rather, it learned and refined the experiment. It kept an A-to-G scale, as alphabetical scales were shown to be generally well understood by consumers and led to a higher willingness to pay for more energy- efficient products. It added the current A+++ to D label for comparison. It also included two numerical scales with slight changes from the one in Phase I, as these were also well understood by consumers (though not as well as alphabetical scales). Finally, as some labels which benchmarked the best available technology gave rise to some confusion in Phase I, they were dropped in Phase II.

The *Car CO2 labelling* study included an online survey followed by online and lab experiments. The survey gave insights into how the purchase process took place, which informed the design of both lab and online experiments. Confirming what was found in the systematic review of the literature, the survey showed that the purchase of a car was a two-step process: (a) consumers first chose a class, a choice where environmental and running costs played almost no role, and then (b) they chose a model. The latter phase was when consumers also considered environmental issues and running costs. This finding was very important in the design of the experiments. In the simulated purchase process, subjects were shown different variants of labels, associated with different models of cars, but always belonging to the same class.

4. Reconsider the search for 'representativeness'

EU policy officers will often aim for results that 'are valid across Europe', and not limited to one country. However, achieving a sample that is representative of all EU countries is generally not feasible within existing budget constraints, especially if the use of experimental methodology is envisaged. How is it possible, then, to arrive at EU-wide results? There is no easy answer to this problem. Rather, the solution will arrive by combining healthy doses of common sense with good methodological thinking.

First of all, a relevant sample does not necessarily need to be representative of the general population. While this might be advisable in some instances, in others it might be counterproductive. If the behaviour of specific target groups is the aim (say, vulnerable consumers) it might be better to look for representativeness *inside* groups. When looking for differences that may arise between different groups or treatments, for example, having subsamples which are representative of specific target groups (e.g. the elderly or immigrants), and which have a comparable number of participants, might be more appropriate than having a sample that is representative of the general population.

Secondly, achieving EU-wide validity might not be necessary. Studies can lead to results that are sufficiently robust for the purposes of EU policy-making without being replicated in each Member State (or in different broad geographical areas of the EU). Behavioural studies are only one element in the evidence-based policy process. Therefore, even though they may capture behaviour in some countries only (which may or may not be generalizable to other contexts) the results of behavioural studies might still be robust enough to make a solid contribution to the policy-making process.

Finally, the way in which people behave is, to a certain extent and in certain domains, common across humans. Take some of the biases and heuristics which have been proven by behavioural economics over the decades, such as loss aversion or the endowment effect. These findings have been replicated over time and across domains, and can safely be assumed to be valid everywhere and at any time. Other aspects of human behaviour, however, are determined by culture or social context and may vary from one place to another.

The only way to determine for sure whether a behavioural insight is common to everyone or is specific to a given cultural setting is to test it. Since testing across all EU countries is not feasible, the proposal is to make a comparison between a reduced number of countries, including countries with different historical and cultural contexts. If no 'country effects' are identified, results could probably be generalised to the EU as a whole. Otherwise, special attention would need to be paid to each country and to the possible factors that account for the observed differences.

Country differences in EU behavioural studies

EU behavioural studies conducted thus far offer mixed results in terms of country differences. No significant differences between countries were found for the *Car CO2 labelling* study and *Online gambling* study. In the *Common Sales Law* study, no differences were found that could be attributed to country of origin in cross-border purchases. And in the *Cross-border healthcare* study, some differences across countries were described. However, there was no mention of a specific result that should be considered for a particular country only.

On the other hand, country effects *were* found in two studies. In the *Bank accounts* study, Ireland and the UK showed the highest numbers of rational pro-switching preferences on average. Romania and Spain showed above-average scores, while Germany, France and Italy had below-average scores. Netherlands, Sweden and Latvia scored the lowest. In the *Online sustainability information* study, country differences existed in consumers' environmental concerns and attitudes towards energy efficient products, social pressure, perceived control and behavioural intentions. These might be partly explained by differences in Internet penetration, and could decrease or disappear over time.

5. Beware: too many experimental conditions spoil the broth

In experiments, every time we want to test the effect of something different on behaviour we need a new experimental condition. For example, if we wish to test the effect of red and yellow in warning labels, we would need two conditions (red and yellow, plus the control condition). If we also want to test the effect of two sizes, we would need four conditions plus the control condition. This would allow testing for the interaction of different variables (red and small, red and large, yellow and small and yellow) and large. If, in addition, we wanted to test something about the design (say modern vs. traditional), we would need a total of nine conditions plus the control group to account for all permutations. Add another dimension and we would need 16 conditions plus control group, and so on, exponentially.

If the study aims to test too many things, it soon becomes messy, cumbersome and expensive. To accommodate new conditions while staying within budget, a reduction in the number of participants per treatment group might be proposed at some point. This solution is suboptimal, as spreading participants too thinly reduces the statistical power of the study. This decreases the possibility of the experiment detecting an effect which might actually exist 'out there'.

The recommendation, therefore, is to allow for more time to fine-tune the design of the experiment, limiting the number of relevant dimensions (which translate to experimental conditions) to those which are essential for achieving the objectives of the study. This will lead to more significant results, allow for testing interaction effects, and ultimately provide better value for money. The emphasis should not be on the quantity of data produced, but on its quality.

6. Expect a null result

One of the problems of experiments is that maybe no intervention has an effect, leaving the researcher with a *null result*. This would not be the case with a survey, for example, which will always leave a good amount of data as a result (more or less interesting, but a corpus of data nonetheless). While in theory a null result in experiments is a result, in practice it is disappointing. In the academic literature, few null results get published. They are seldom considered interesting. Moreover, while a null result might demonstrate the absence of an effect 'out there' in the real world, it might also suggest a poorly conducted experiment which failed to detect an effect that *did* exist (a Type II error).

Null results are a reality in experimental studies and, when considering a behavioural study in support of EU policy, they should always be kept in mind as a possible outcome. The recommendation is to expect a null result and to consider what the consequences would be to the study as a whole. Having said that, a number of actions can be taken to avoid the possibility of a Type II error or mitigate the consequences for the study of arriving at a null result.

Firstly, a study's design can include a robust ex ante sample-size calculation. In other words, what size of sample would be needed to detect an effect and minimise the possibility of a Type II error? The larger the sample size, the smaller the risk of getting a null result. However, given that studies are often conducted within a fixed budget constraint, the larger the sample size, the fewer the number of treatments that can be tested. Moreover, the calculation will also need to include the expected strength of the effect: more subtle effects needs larger sample sizes to be detected. The whole process involves a delicate balancing act. As such, it is a process that should involve both policy officers and behavioural researchers.

Secondly, if the objective is not to test whether an intervention has an effect, but rather to *compare* the effect of different interventions, then the strength of the interventions can be increased to minimise the chance of a null result. For instance, if an experiment seeks to test the effect of different designs in food labels, it can choose to expose participants to small labels or big labels. And they can be exposed to them briefly or for a longer period of time. Bigger labels shown for a long time are more likely to have an effect than smaller labels shown for a brief period of time. And if all labels are the same in terms of size and length of exposure, the impact of their designs (on whatever output measure) will be comparable.

Finally, in order to safeguard against the possibility of a null result, observed behaviour in an experimental setting can be complemented with self-reported measures (e.g. a post-treatment survey). Even if experimental conditions do not have an effect on behaviour, they still might have an effect on psychological intangibles such as *intention to behave*, *consumer satisfaction* or *trust*. These are often measured with a set of questions (or *validated scales*) in a questionnaire, after being exposed to an intervention. While these measures are arguably less reliable than observed behaviour, they still constitute useful information for policy-making.

Including complementary measures

The *Bank accounts* study widened the scope of its experimental study and included relevant constructs in questionnaires before and after the experiment. These complementary measures proved very valuable, both as dependent and independent variables, and helped overcome some limited experimental results.

The study looked at whether different information-based EU policy measures could help to improve the transparency and comparability of bank fees. This, in turn, would increase the willingness of consumers to 'shop around' and take more rational decisions when it came to opening and switching bank accounts.

The main part of the study involved testing policy interventions. Results from the online experiment showed that these interventions had limited impact in encouraging consumers to make cost-driven or rational choices. The only – small, but significant – result was that an attractively-presented 'representative cost summary' for two types of users (one active and one passive) resulted in significantly higher shares of pro-rational bank account switching behaviour.

However, other self-reported measures were taken as explanatory variables and helped explain observed behaviour in the experiment. Some turned out to be very significant, and made a substantial contribution to the study. For example, *usage behaviour* (a composite indicator showing the scope of banking services used by participants) and *satisfaction with current provider* were more closely associated with participants' behaviour in the experiment than the policy interventions tested.

In addition, answers to a post-experiment questionnaire complemented the experimental analysis. Two potential policy interventions were presented to respondents: a legally binding implementation of the EU banking industry's common principles (which establish the roles and responsibilities of the 'old' and 'new' banks, and fix clear limits for switching costs) and a redirection service for credits and debits (preventing missed payments as a result of switching bank accounts). Around six in ten consumers thought these measures would make switching more likely. Of these, the redirection service was considered more effective as it attracted a broader range of consumer segments.

7. Ensure the ecological validity of experiments

Scientists differentiate between internal and external validity of experiments. Internal validity refers to how well the experiment is set up, particularly if it correctly isolates the effect of variables. External validity refers to the generalizability of the findings to other situations and other individuals, a key aspect of which is *ecological validity.*

An experiment will be ecologically valid if it successfully makes people feel they are in a real-life situation, so that insights about their behaviour can be safely inferred to apply outside of a laboratory setting. To achieve this kind of validity, experiments may be incentivised (and policy officers should insist on evaluating this option). The incentives are not just for showing up. Rather, they are for rewarding conscientious behaviour in the lab, guaranteeing that participants take their tasks seriously and thereby emulate real-life behaviour as much as possible. For example, if the participants do not pay attention or just rush through, they could miss out on possible rewards.

The inclusion of incentives is a delicate matter and should be carefully considered. For one, issues such as the size of incentives matter, and will depend on factors such as age and socio-economic status (receiving €10 when you are 50 and well-off is not the same as receiving €10 when you are 18 and cash-stricken). But more importantly, incentives are not necessarily appropriate in every experiment. For example, if the objective is to observe whether participants make mistakes when purchasing digital goods online, an incentive is appropriate. We want participants to try their best not to make a mistake, just as people try to be careful when shopping online. However, if we want to observe and measure their disgust at seeing pictorial warnings on cigarette packages, an incentive may not be necessary (indeed it might even introduce distortions). In sum, incentives need not always be included, but the option to include them should always be evaluated.

Another element that has an effect on ecological validity is the decision to conduct an online versus an offline experiment. Most EU behavioural studies have included online experiments. This particular approach makes it possible to recruit bigger samples and to replicate the study in several countries at the same time. Also, since a number of activities are moving to an online setting (e.g. shopping or gambling), online experiments conducted in participants' homes are increasingly reflective of actual behaviour. However, in these cases the researcher loses the ability to control the environment surrounding the participant, and therefore maintaining internal validity becomes a challenge.

Using incentives to ensure ecological validity

The *Online gambling* study sought to understand, through experiments, people's online gambling activity. A key aspect of the design was to test what remedies could make people bet less, spend less time playing, and opt out of gambling altogether. In order to achieve this, the design had to include monetary incentives – it had to make the betting real (not just make it appear real).

Participants were given 'virtual dollars' to gamble, which could be exchanged for real money at the end of the experiment. They were also given real money for completing the experiment (10 British pounds). This payment could be exchanged for virtual dollars too if participants wanted to extend their playing. It could also be reduced to 5 pounds if they decided to opt out of the experiment once they started. These different types of monetary incentives, and the relationship between them, were necessary to ensure realistic behaviour throughout.

For example, participants were offered early on the chance to opt out of gambling following exposure to a remedy. If many people opted out, the remedy would be considered effective. However, there had to be a minimum incentive for opting out. If the choice were to opt out without a reward vs. staying in the game with a chance of winning something, everyone would have stayed in the game.

In the end, the experiment had a complex design and many more such permutations were taken into consideration. What was consistent throughout, however, was a consideration of how the process would be viewed by the participant, and to what degree each situation in which he or she had to make a choice emulated a real-life situation.

A final word...

If these seven points, addressed to policy officers, were to be summarized in a few words, these would be: *be clear about what you wish to achieve and work closely with behavioural researchers*. Being clear implies knowing what the purpose of the behavioural study is, the type of evidence expected from it, and the policy initiative it should support. Working closely with researchers means understanding their need to translate policy objectives into workable research questions, participating in key decisions such as the choice of methodology or sample-size calculations, and even trying out experiments for themselves during the pilot phase. All of this is not as daunting as it might appear at first, especially if some specialised support is available. As a reward, the final outcome of the study is far more likely to be successful, and the entire process more gratifying.

Annex: Published behavioural studies in support of EU policy

At the time of going to print, twelve studies had already been finalised (eight of which had been published), and seven more were currently running. This report only covers those studies that have been published and are publicly available.

1. **Bank accounts study** (*Bank Fees Behaviour Study*[6], conducted by the TNS consortium for DG SANCO) focused on generating evidence on increasing the transparency and comparability of current account fees. For this purpose, it included an online experiment and survey. The results informed the Impact Assessment for the *Proposal for a Regulation of the European Parliament and of the Council on Reporting and Transparency of Securities Financing Transactions*, 29 April 2014, COM(2014) 40 final {SWD(2014) 31 final}. Main findings: consumers had no intention of switching bank providers because of high customer satisfaction and lack of knowledge about benefits of doing so; tested policy interventions had limited impact on improving the likelihood of making rational (cost-driven) choices; and there was a considerable variation in consumers' behaviour and preferences across countries.
2. **Car CO2 labelling study** (*Testing CO2/Car Labelling Options and Consumer Information*[7], conducted by the LSE consortium for DG CLIMA) aimed to test the effectiveness of car labels and mandatory information regarding CO2 emissions and fuel efficiency in promotional material. A lab experiment and an online experiment were conducted. Main findings: there is a need to increase familiarity (through promotional material) and trust with labels, as well as comprehension. Labels should be based on vertical layout, absolute classification system, and running cost per mile or km.
3. **Common Sales Law study** (*Testing of a Standardised Information Notice to Consumers on the Common European Sales Law*[8], conducted by the Gallup consortium for DG JUST) explored the effectiveness of a standardised information notice and the most appropriate content for consumers when making cross-border purchases. Participants enrolled in two online experiments and a survey on comprehension, knowledge and perception. Main findings: consumers did not spend too much time reading the information notice (when it was not mandatory, most did not even read it). However, showing a notice increased the comprehension of rights granted by the Common European Sales Law.

6 http://ec.europa.eu/consumers/financial_services/reference_studies_documents/docs/report_6146_bankfees_en.pdf
7 http://ec.europa.eu/clima/policies/transport/vehicles/labelling/docs/report_car_labelling_en.pdf
8 http://ec.europa.eu/justice/contract/files/common_sales_law/cesl_gallup_consortium_final_report_en.pdf

4. **Choice of payments study** (*Study on the Effects of Information Disclosure on Consumer Choice of Payment Instruments*[9], conducted by the TNS consortium for DG COMP) explored whether and how the choice of payment methods (e.g. credit card payments vs. cash) would change if there was more information available on the real costs attached to this choice. They used online and offline experiments. Results showed that information-based policy measures enhanced the effectiveness of monetary nudges towards alternative payment methods, provided they highlighted the cost difference to consumers clearly. Framing it as a surcharge was particularly effective.
5. **Cross-border healthcare study** (*Impact of Information on Patients' Choice Within the Context of the Directive 2011/24/EU of the European Parliament and of the Council on the Application of Patients' Rights in Cross-border Healthcare*[10], conducted by the London Economics consortium for DG SANCO) assessed to what extent the information provided on National Contact Point (NCP) websites affected patients' decision to opt for cross-border healthcare provision. Surveys and an online experiment were conducted for this aim. Main findings: price of treatment, waiting time and relative level of trust influence patients' choice of healthcare provider; the format of the webpage does not seem to affect the decision to choose cross-border healthcare, although understanding improved when information was less complex.
6. **Energy labelling study** (*Study on the Impact of the Energy Label – and Potential Changes to it – on Consumer Understanding and on Purchase Decisions*[11], conducted by the London Economics consortium for DG ENER) implemented online behavioural experiments and a bricks-and-mortar experiment to measure cognitive and behavioural responses to various label elements. This study informed the Impact Assessment for the *Proposal for a Regulation of the European Parliament and of the Council Setting a Framework for Energy Efficiency Labelling and Repealing Directive* 2010/30/EU, 15 July 2015, COM(2015) 341 final {SWD(2015) 139 final}. Main findings: Energy efficiency scales that include letters as opposed to numbers are generally better understood by consumers, but understanding of the scales 'A+++ to D' and 'A to G' is similar between the two. Alphabetic scales appear to lead to more consumers choosing energy efficient products compared numeric scales, and labels with an 'A to G' scale appear to lead to more consumers choosing energy efficient products compared to the 'A+++to D' scales. The choice of label design is of greater importance in influencing behaviour for products where energy efficiency is not of key importance to consumers.

9 http://ec.europa.eu/competition/sectors/financial_services/mif_final_report_en.pdf

10 http://ec.europa.eu/health/cross_border_care/docs/cbhc_information_patientschoice_en.pdf

11 https://ec.europa.eu/energy/sites/ener/files/documents/Impact%20of%20energy%20labels%20on%20consumer%20behaviour.pdf

7. **Online gambling study** (*Study on Online Gambling and Adequate Measures for the Protection of Consumers of Gambling Services*[12], conducted by the LSE consortium for DG MARKT) tested the effectiveness of potential policy initiatives which aim to better protecting vulnerable consumers. The results informed the Impact Assessment for the *Recommendation on Principles for the Protection of Consumers and Players of Online Gambling Services and for the Prevention of Minors from Gambling Online*, 14 July 2014, {SWD(2014) 233 final}. The consortium ran a lab experiment, an online experiment and a survey for this. Main findings: 'pre-gamble treatments' are generally not effective in dissuading gambling. Pictorial and textual warnings as pop-ups made consumers reduce the speed of their bets, but not the amount. The 'non-use of information' and 'rational ignorance' biases, characteristic of online behaviour, might account for this. For 'in-gamble treatments', fixed monetary limits and alerts work (probably due to 'status quo' bias). Interrupting, altering or disturbing 'human-machine' interaction has a positive effect.
8. **Online sustainability information study** (*Study on the Effects on Consumer Behaviour of Online Sustainability Information Displays*[13], conducted by the ECORYS consortium for DG CNECT) focused on examining the provision of online information on energy efficiency of household products to promote energy efficient product choices. An online study was conducted including an experiment and a questionnaire. Main findings: putting energy labelling on the Internet has a significant impact on consumers' product choice. Given the increasing importance of the online channel, not just for buying, but also for finding information and making choices before offline purchases, labels should be designed in such a way that their effectiveness in the online environment is maximised (they should not just mimic the ones used offline).

12 http://ec.europa.eu/internal_market/gambling/docs/initiatives/140714-study-on-online-gambling-final-report_en.pdf

13 http://ec.europa.eu/digital-agenda/en/news/effects-consumer-behaviour-online-sustainability-information-displays-study-report

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